2/4/2017

RESUME

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ACADEMIC DEGREES

- 2008 – Ph.D, Department of Biochemistry, Hebrew University in Jerusalem.
- 2003 – M.Sc, Department of Biochemistry, Hebrew University in Jerusalem.
- 2000 – B.Sc, Biological Sciences, Hebrew University in Jerusalem.

ACADEMIC APPOINTMENTS

- 2016 – present – Senior Intern, Department of Biomolecular Sciences, Weizmann Institute of Science, Rehovot.
- 2013 – 2016 – Postdoctoral Associate, Department of Biomolecular Sciences, Weizmann Institute of Science, Rehovot.
- 2009 – 2013 – Postdoctoral Associate, Department of Computational and Systems Biology, University of Pittsburgh (Pennsylvania).

RESEARCH INTERESTS

Investigation of the structure, function and dynamics of various membrane transport systems, including transporters and channels, using experimental and computational approaches.

FELLOWSHIPS, AWARDS AND HONORS

- Dean of Faculty Fellowship (2014), by the Feinberg Graduate School, WIS.
- Curwen-Lowe postdoctoral fellowship, to high-ranking applicants of the Dean's Fellowship (2014), by the Clore Center for Biological Physics, WIS.
- Best Postdoctoral Fellow Award (2011), Department of Computational & Systems Biology, University of Pittsburgh.
- Ph.D. degree (2008), Graduated with Honors.

PUBLICATIONS

Theses

- M.Sc. & Ph.D. – Investigating Structural-Functional Aspects of the γ–Aminobutyric Acid (GABA) Transporter GAT-1

Peer-Reviewed Publications

- The Interaction of the γ-Aminobutyric Acid Transporter GAT-1 with the Neurotransmitter Is Selectively Impaired by Sulfhydryl Modification of a Conformationally Sensitive Cysteine Residue Engineered into Extracellular Loop IV. **Zomot E** and Kanner BI. *J. Biol. Chem.* Oct 2003; 278: 42950 – 42958.
- Proximity of Transmembrane Domains 1 and 3 of the γ-Aminobutyric Acid Transporter GAT-1 Inferred from Paired Cysteine Mutagenesis. **Zomot E**, Zhou Y & Kanner BI. *J. Biol. Chem.* Jul 2005; 280: 25512 – 25516.
- Identification of a Lithium Interaction Site in the γ-Aminobutyric Acid (GABA) Transporter GAT-1. Zhou Y, **Zomot E**, & Kanner BI. *J. Biol. Chem.* Aug 2006; 281: 22092 – 22099.
- Mechanism and site of chloride interaction with Neurotransmitter Sodium Symporters. **Zomot E**, Bendahan A, Quick M, Zhao Y, Javitch JA & Kanner BI. *Nature*. 449, 726 – 730 (19 Aug 2007).
- The sodium/galactose symporter crystal structure is a dynamic, not so occluded state. **Zomot E** & Bahar I. *Mol. Biosyst.* 2010 Jun 18;6(6):1040-6.
- Protonation of glutamate-208 induces the release of agmatine in an outward-facing conformation of arginine/agmatine antiporter. **Zomot E** & Bahar I. *J. Biol. Chem.* 2011 Jun 3;286(22):19693-701.
- A conformational switch in a partially unwound helix selectively determines the pathway for substrate release from the carnitine/γ-butyrobetaine antiporter CaiT. **Zomot E** & Bahar I. *J. Biol. Chem.* 2012 Sep 14;287(38):31823-32.
- Intracellular gating in an inward-facing state of aspartate transporter Glt_{Ph} is regulated by the movements of the helical hairpin HP2. **Zomot E** & Bahar I. *J. Biol. Chem.* 2013 Mar 22;288(12):8231-7.
- Global Motions Exhibited by Proteins in Micro- to Milliseconds Simulations Concur with Anisotropic Network Model Predictions. Gur M, **Zomot E** & Bahar I. *J. Chem. Phys.* 2013 Sep 28;139(12):121912.
- Investigating substrate-induced motion between the scaffold and transport domains in the glutamate transporter EAAT1. Rong X, **Zomot E**, Zhang X & Qu S. *Mol. Pharmacol.* 2014 Dec;86(6):657-64.
- Microseconds simulations reveal a new sodium-binding site and the mechanism of sodium-coupled substrate uptake by LeuT. **Zomot E**, Gur M & Bahar I. *J. Biol. Chem.* 2015 Jan 2;290(1):544-55.
- Energy landscape of LeuT from molecular simulations. Gur M, **Zomot E**, Cheng MH, Bahar I. *J. Chem. Phys.* 2015 Dec 28;143(24):243134.

- Effect of Dimerization on the Dynamics of Neurotransmitter:Sodium Symporters. Gur M, Cheng MH, **Zomot E** & Bahar I. *J. Phys. Chem. B*. 2017 Feb 7. doi: 10.1021/acs.jpcb.6b09876.

Review Papers

- Sodium-Coupled Neurotransmitter Transporters. Kanner, B. I. & Zomot, E. *Chem. Rev.* 2008 May;108(5):1654-68.

Book Chapters

- Sodium-coupled secondary transporters: Insights from structure-based computations. Zomot, E. Bakan, A., Shrivastava, I.H., DeChancie, J., Lezon, T.R. & Bahar, I. 2011. Aug 12. *Molecular Machines* (edited by Benoit Roux).

CONFERENCES

Talks

- Membrane Protein Structural Dynamics Consortium-Core. Location: University of Chicago, Chicago, IL. Date: May 2-3, 2012. Title: *The crystallized inward-facing carnitine/γ-butyro-betaine antiporter, CaiT, is a substrate-releasing conformation*. (Plenary)
- Membrane Protein Structural Dynamics Consortium-Core. Location: University of Chicago, Chicago, IL. Date: June 8-9, 2011. Title: *Protonation of glutamate-208 induces the release of agmatine in an outward-facing conformation of arginine/agmatine antiporter*. (Plenary)
- Gordon Research Conference; Membrane Transport Proteins. Location: Tilton School, Tilton, NH. Date: June 10-15, 2007. Title: *Mechanism and site of chloride interaction with Neurotransmitter Sodium Symporters*. (Plenary)